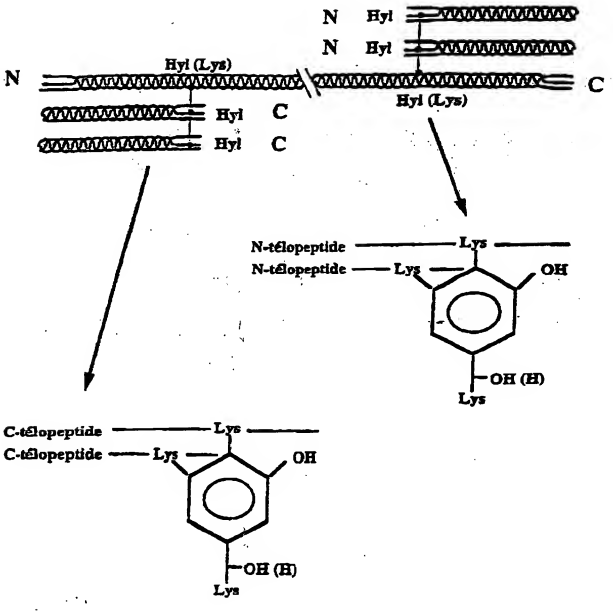
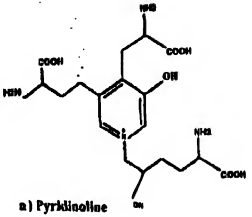
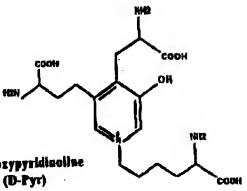


FIG. 1

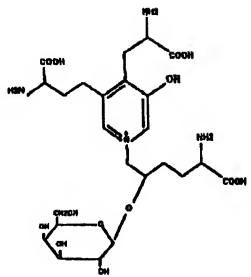
EP2236122 (A1) 2010-10-06



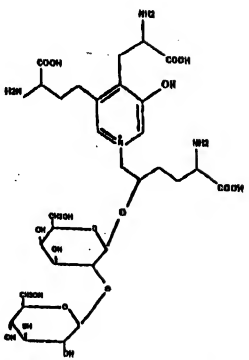
a) Pyridinoline
(Pyr)



b) Deoxypyridinoline
(D-Pyr)



c) Galactosyl Pyridinoline
(Pyr-Gal)



d) Glucosyl-Galactosyl Pyridinoline
(Pyr-Gal-Glc)

FIG. 2

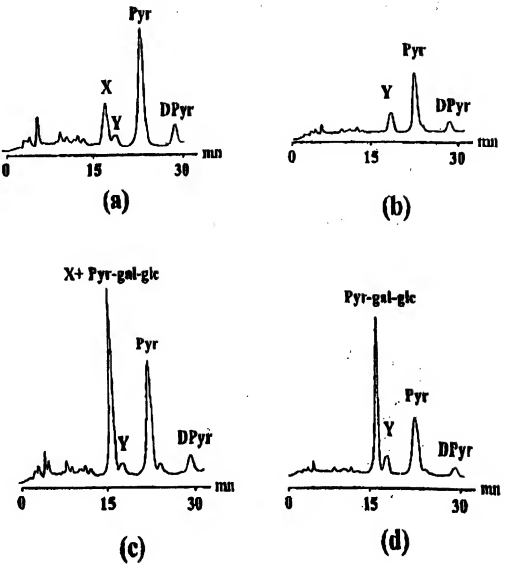

Pyr
X
Y
DPyr
mn
0
15
30
(a)
Pyr
Y
DPyr
mn
0
15
30
(b)
X+ Pyr-gal-glc
Pyr
Y
DPyr
mn
0
15
30
(c)
Pyr-gal-glc
Pyr
Y
DPyr
mn
0
15
30
(d)

FIG. 3

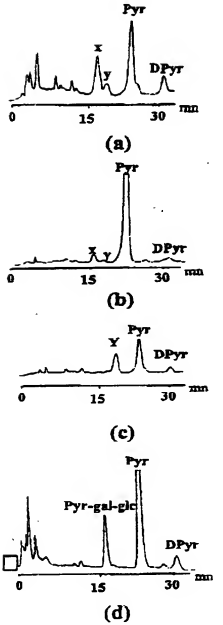


FIG. 4

20207D 26780D1

2020TO' 2673E00T

FIG 5

Hydrolysis time		5 hours	10 hours	15 hours	20 hours
Tissue:					
Bone	1	-	-	-	-
	2	-	-	-	-
Synovial	1	105%	94%	54%	37%
	2	72%	56%	64%	24%
Cartilage	1	6%	2%	1%	1%
	2	4%	2%	2%	1%

20200707261838001

FIG 6

Hydrolysis time		5 hours	10 hours	15 hours	20 hours
Tissue:					
Bone	1	56%	33%	28%	24%
	2	55%	44%	34%	29%
Synovial	1	16%	12%	12%	12%
	2	9%	10%	9%	9%
Cartilage	1	-	-	-	-
	2	-	-	-	-

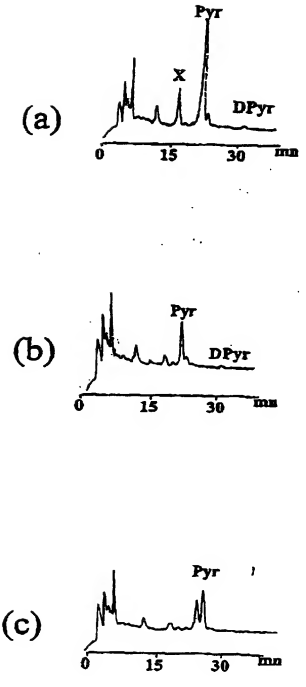
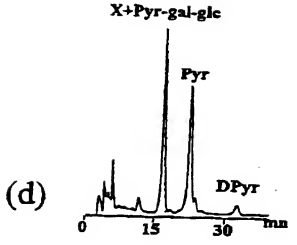
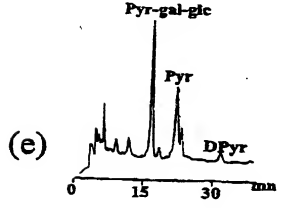


FIG. 7

20201026T18E007





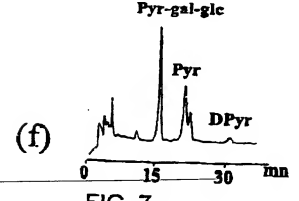


FIG. 7 Cont'd.

20201026183007

20020702678E001

			Total Pyr (nmole/nmole Cr)		Free Pyr (nmole/nmole Cr)			(nmole/nmole Cr)	
Subjects	n	Age	Pyr	d-Pyr	Pyr	D-Pyr	Pyr-Gal-Glc	CartiLaps	CrossLaps
Pre-menopausal women	20	35.7 ± 2.8	28.5 ± 4.1	5.9 ± 1.4	13.4 ± 2.7	3.3 ± 0.9	4.5 ± 1.0	6.3 ± 0.9	126 ± 27
Post-menopausal women	20	55.3 ± 2.4	34.8 ± 9.5	7.6 ± 2.6	15.6 ± 3.7	3.7 ± 0.9	4.8 ± 1.7	7.5 ± 2.8	281 ± 100
Controls	40	45.5 ± 10.3	31.6 ± 7.9	6.7 ± 2.2	14.5 ± 3.4	3.5 ± 0.9	4.7 ± 1.4	6.9 ± 2.2	203 ± 106
Rheumatoid arthritis	27	56.2 ± 11.9*	72.2 ± 51.8*	10.8 ± 7.6*	26.3 ± 15.0*	4.0 ± 2.3*	9.6 ± 5.9*	12.4 ± 8.5*	266 ± 187*
Paget's disease	10		125.8 ± 53.6*	31.2 ± 13.5*	42.1 ± 15.4*	10.2 ± 5.1*	6.1 ± 1.9	7.2 ± 2.9	834 ± 352*

* Statistical significance (Anova) $p < 0.05$ of the difference compared with control group.

FIG. 8

20020701261800T

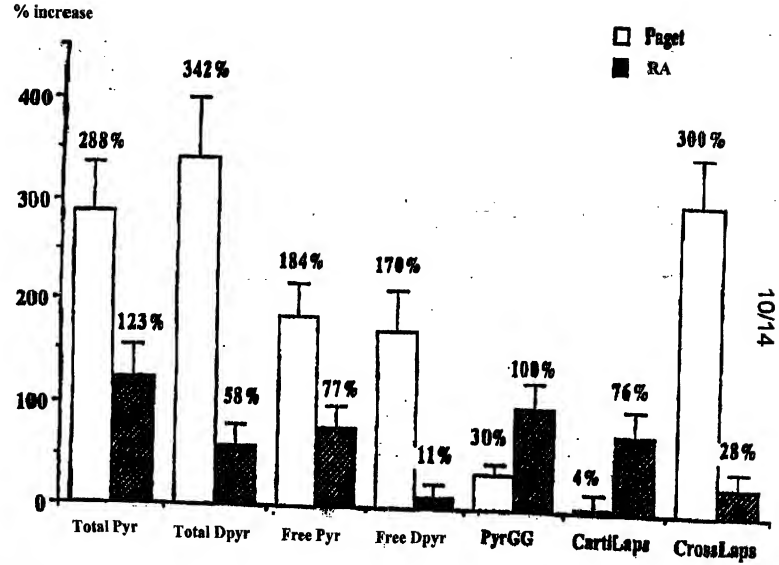


FIG. 9

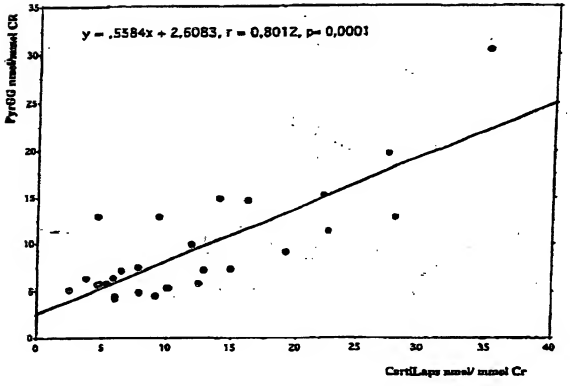


FIG. 10

20201012:261832001

20020703 26T8E00T

FIG 11

	n	Pyr-Gal-Glc (nmole/mmole Cr)	CartiLaps (nmole/mmole Cr)
Controls	40	4.7 ± 1.4	6.9 ± 2.2
Rheumatoid arthritis (RA)	27	9.6 ± 5.9*	12.4 ± 8.5*
Destructive RA	12	12.2 ± 7.4*	16.5 ± 10.0*
Non destructive RA	15	7.5 ± 3.2*	9.2 ± 5.4**

* Statistical significance (T-test) $p < 0.001$ ** Statistical significance (T-Test) $p < 0.05$

	Lequesne	Womac	Tibio-femoral space
Pyr-Gal-Glc	0.42*	0.50*	-0.50*

* $p < 0.01$

FIG. 12

2020TO0826

	Narrowing of joint line		Bone erosion		Total score	
Progression	**YES (n=27)**	**NO (n=84)**	**YES (n=41)**	**NO (n=70)**	**YES (n=54)**	**NO (n=57)**
Urinary Pyr-Gal-Glc (nmole/nmole creatinine)	**8.8**	**7.2**	**9.3***	**6.5**	**8.8****	**6.3**

Statistical significance of difference compared with group with no progress * p = 0.03; ** p = 0.05

FIG. 13